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THE DIAGNOSIS OF ANEURISM OF THE AORTIC ARCH.

By **William Fitch Cheney, M. D.**;
Professor of Principles and Practice of Medicine, Cooper Medical College, and Physician to Lane Hospital, San Francisco.

Read before the San Francisco County Medical Society.

I have brought this case before you this evening because it presents so clearly the points in clinical history and in physical examination on which we depend for the diagnosis of aneurism of the aortic arch.

The man is 61 years of age. For thirty years of his life he was a butcher, and in this occupation had to do much heavy lifting, often handling portions of beef that weighed 200 to 250 pounds. For the last three years he has not been able to do any work, because of his present illness; but as far back as six years ago he had an attack diagnosed as la grippe, since which he has never felt wholly well. Previous to that attack he had always been a strong and active man. He never drank to excess and he denies venereal infection.

Of his present symptoms, for which he sought relief at the dispensary of Cooper Medical College, the folowing account has been elicited: 1. *Chronic cough:* This has been present for twelve or fourteen years, but has been growing progressively worse for the past three or four years. 2. *Eructations of clear fluid:* These have occurred more or less constantly for the past two years, sometimes absent for a few days, but certain to recur sooner or later; they come especially after eating, but sometimes between meals; the material brought up averages a tablespoonful at a time, is clear and watery, mixed with mucus and very rarely with food. 3. *Pain:* This is present in the left side, the left shoulder and arm and the left back, and in the region of the heart; it has been pretty steady for two years past, but varies in intensity, sometimes only a dull ache, at other times excruciating in its violence; exertion always makes it worse; recently it has been especially severe in the back, under the left shoulder blade. 4. *Dyspnœa:* This is marked on slight exertion, has been noticed particularly in the last six months and is growing steadily worse; because of it the patient cannot walk any distance or do any work. 5. *Loss of voice:* Six months ago the man's voice suddenly changed so that now it is squeaky and falsetto; previously it was always clear and loud; now it is at times only a whisper. 6. *Failure in general health:* For the past year the man has lost in flesh and in strength, his appetite has failed him, and as he expresses it, he has "generally broken down."

The signs that were discovered on physical examination are equally peculiar and diagnostic. They are as follows: 1. *Bulging* in the region of the first, second and third ribs on the left side of the thorax, close to the sternum. 2. *Pulsation* in the region of bulging, perceptible on inspection, and heaving and forcible on palpation; abnormal pulsation is also to be seen on the right side of the sternum, in the second and third intercostal spaces; but the maximum pulsation is apparently substernal and in the first, second and third left intercostal spaces, near the sternum. 3. *Inequality in the arteries:* The right carotid has a strong and distinct pulsation, while the

5330

left is much less strong and full, at times barely perceptible when the two arteries are palpated synchronously; the volume of the right brachial and of the right radial is also distinctly greater than that of the left arteries corresponding. 4. *Percussion dullness:* In the left supra- and infraclavicular regions, as low as the third intercostal space, the normal pulmonary resonance is replaced by dullness on percussion; the dullness gradually shades off into resonance at the right border of the sternum and at the left anterior axillary line. 5. *Systolic bruit:* The apex beat is situated inside the nipple line, but is pushed downward into the sixth intercostal space; both heart sounds are clear at the apex; at the second and third right intercostal spaces there is a systolic bruit, but the second sound is clear; over the sternum and just to the left of the sternum, in the second and third intercostal spaces, the bruit is also heard, replacing the first sound and synchronous with the vigorous pulsation; this bruit can be heard all over the anterior thorax on the left side, as low as the fourth intercostal space, but disappears at the apex and directly over the heart. 6. *Difference in respiratory sounds:* The breath sounds are feeble and indistinct over the left lung as compared with the right, especially over the upper part. 7. *Paralysis of the left vocal cord:* On account of the alteration in the voice the man was referred to Dr. Barkan's service for laryngoscopic examination; the report states that he has complete paralysis of the left vocal cord. 8. *Tracheal tugging:* On placing the patient with his head somewhat thrown back and then making moderate traction upwards with the fingers pressed against the sides of the larynx, a sensation of traction or tugging downwards is plainly perceived with each beat of the heart.

Such are the symptoms and physical signs in this man's case. To understand how we reason from these facts to a diagnosis of aneurism, it is necessary first to recall the anatomical relations of the aortic arch. Behind it lies the trachea, just previous to its bifurcation; the esophagus; and the left recurrent laryngeal nerve, which is given off from the pneumogastric in front of the arch, curves around underneath it and ascends behind it to reach the interval between trachea and esophagus on its way to the larynx. Beneath the arch runs the left bronchus; and from the upper part of the arch are given off the innominate, the left common carotid, and the left subclavian arteries. Remembering these anatomical points, we think at once, on meeting such a group of symptoms as this case presents, of some alteration in the contour of the aortic arch producing pressure on the neighboring structures.

The most suspicious symptom is the peculiar voice, not hoarse as in laryngitis, but falsetto and squeaking; pointing to some interference with the action of the muscles governing one or the other vocal cord; and this we know would be produced by pressure on either recurrent laryngeal nerve. The chronic cough and the dyspnœa can be attributed to similar pressure on the trachea or on a bronchus. The peculiar eructations possibly mean a dilation of the esophagus, this in turn due to pressure farther down that causes partial obstruction. The pain is simply the consequence of the encroachment of the enlarged aortic arch on all surrounding parts, in its attempt to make room for itself. Thus taking the symptoms together we are led to think of aortic aneurism as a likely cause, especially when we recall the man's age, which makes arterial degeneration probable, and his occupation, which for many years put a great strain upon his large vessels.

Coming to the physical examination, for the evidence it may offer in proof or disproof of the suspicion thus aroused, we find first a bulging area in the region of the aortic arch, as if something were making pressure from beneath against the chest wall. We find that this bulging area pulsates with each beat of the heart. We find that over this pulsating tumor the pulmonary resonance is replaced by dullness, indicating that some abnormal medium intervenes in that locality between the wall and the lung. We find that over the course of the aortic arch the first tone of the heart is replaced by a swishing sound, as if the blood eddied there within a sac or as if it passed through a tube that suddenly increased in caliber. We find that the left lung is not so well supplied with air as is the right, possibly indicating some interference with the lumen of the left bronchus. We find complete paralysis of the left vocal cord, proving some disturbance in the course of the left recurrent laryngeal nerve. We find a rhythmical traction on the trachea synchronous with each heart beat, as would occur with the beating of an enlarged aortic arch against the trachea or the left bronchus. Finally we find an inequality in the fullness of the blood vessels on the two sides of the neck and in the two arms, indicating that whatever change has taken place in the arch has occurred beyond the origin of the innominate artery, the first to be given off, and involving the origin of the left common carotid and the left subclavian, which lie just beyond. From all these findings we feel justified in finally concluding that we have to do here with an aneurism of the transverse portion of the aortic arch.

I am well aware that the diagnosis of aortic aneurism cannot always be made so positively as in this case; more commonly we cannot speak with certainty, but only with probability on our side. Before the aneurism has developed to such an extent as to produce definite physical signs, its manifestations are exceedingly apt to be misinterpreted. The pain for instance is likely to be set down as rheumatic or neuralgic; the cough and dyspnœa as due to chronic bronchitis; the fluid eructations as indicative of dyspepsia; and the change in the voice as meaning chronic laryngitis. But if in addition to these symptoms the laryngoscope shows a paralysis of one or the other vocal cord; and if the carotid, brachial and the radial arteries on one side are decidedly different in volume from the corresponding arteries on the other; the case at least becomes an exceedingly suspicious one, even before bulging of the chest wall, a pulsating area and a systolic bruit have made their appearance; particularly if all these phenomena occur in a man past middle life who has done heavy work for many years. In this connection I am reminded of another case that was referred to the Medical Clinic just a year ago, from the Laryngological Clinic. The man had come to the dispensary for advice about his voice, which had gradually become husky and whispering two months before. Laryngoscopic examination revealed paralysis of the left vocal cord. He had no other complaint to make besides his loss of voice; but physical examination showed general arterio-sclerosis and the pulse in the left carotid, brachial and radial not so full or strong as in the right. There was no abnormal pulsation perceptible anywhere over the upper thorax. The man was 57 years old, a tinner of roofs for twenty years past; an occupation which compelled him frequently to pull up heavy weights from the ground to a considerable height. In this case the diagnosis was probably but not certainly aneurism of the aortic arch.

Finally it remains to speak of one other diagnostic aid at our disposal for the detection of aortic aneurism, viz: the X-ray. The patient I show you to-night has been subjected to this method of examination, and it confirmed very beautifully the opinion previously formed. With the fluorescent screen a dark area was discovered proceeding from the left border of the sternum in the region just below the clavicle, but not extending so far to the left as the percussion dullness does. Evidently the latter is due partly to compressed lung. The screen examination proves conclusively that the aneurism is situated in the aortic arch, but it must lie mainly behind the upper portion of the sternum, as it is not visible at all at the right border and not more than two inches beyond the left border. This positive demonstration was extremely interesting, but after all it did no more than corroborate what had already been determined by other and more available methods. I do not doubt that experts may be able to discover with the X-ray aneurisms too small or too deep-seated to give rise to physical signs; but for the great majority of practitioners the diagnosis must continue to depend upon the keenness of their wits in recognizing and interpreting the evidence obtained in other ways.

SURGICAL TREATMENT OF ANEURISM OF THE AORTIC ARCH.

By Julius Rosenstirn, M. D.

Read before the San Francisco County Medical Society.

The medical treatment, which has been so ably outlined by Dr. Moffitt, has only been successful in a small number of cases. Surgical treatment has been appealed to and has responded with better effect. One of the earliest methods of fighting this dreadful disease was digital compression, which has been used in the treatment of aortic aneurism since very early times. Divers apparatus for the purpose of fixing the patient in a firm position and exercising gradual pressure on the aneurism have been devised and patients have been in this harness for months at a time; but with little result. A better method is the compression by means of a bag of shot. That has to be used for a long period of months. In two cases it has been reported to have been of use. I believe that the best of all is a digital compression in the case of a patient who can intelligently apply it for a long time. There have been with digital compression in aortic aneurism, as far as literature shows, two very fine results achieved after two or three months of compression and the improvement has lasted over six months. These parties have not been under observation any great length of time, so it has not been ascertained whether this improvement was permanent or not.

In 1864, Moore of London published a method which gave very good results. It was the introduction into the aneurism of filiform material. He reported twelve cases: ten thoracic and two abdominal. Moore used excessive amounts of wire. His first case had to suffer for this, dying soon after having 26 yards of fine iron wire introduced into the aneurismal sac. The earlier cases coming after Moore's were all treated in the same erroneous manner. Cailey's case had forty feet first introduced, and two months later thirty-five feet more. Loreta, in 1885, was the first one to introduce steel wire into the abdominal aneurism. Morse of San Francisco did it in 1887. Loreta's case died very soon after the introduction of the wire, while Morse's case lived

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at least one year after the operation and was very much improved. There have been several modifications of this method of introducing wire into the aneurismal sac. Fine watch spring has been used. Levis used horsehair and Murray catgut, while Schrotter introduced silkworm gut. The wire method has been found to be the best. Silkworm gut, catgut and horsehair have all been abandoned.

Electrolysis by means of needles introduced into the sac was first employed by Petrequin in 1831. Ciniselli has had the greatest experience with this method. In 1878 he reported 38 cases of thoracic aneurism treated in this way. Eight were improved and remained so for over one year. Nine remained improved for from three to twelve months. The balance showed negative results. The combined method of the introduction of wire with electrolysis seems to be the best of all and promises the best results. Up to 1896 nine cases had been published, eight thoracic and one abdominal. Of these, three have been cured longer than one year, two have shown improvement and four have given negative results. The first operation of this kind was performed by Carradi in 1879. Other cases on record are those of Barwell, Roosevelt, Abbe, Kerr, my own case, and Stewart of Philadelphia. The attention of the profession was drawn early to the necessity of using in these cases very high milliampere power, not more than 30 or 40 at the most. It has been shown that at least 70 to 100 has to be used, and the time the electrolysis has to take effect at each session has to be prolonged. It should be applied from twenty minutes up to an hour because it is only through the prolonged effect of the electrolysis that the coagulum will form satisfactorily. It has also been proven that the anode has to be the active part. Where these methods have been strictly adhered to, good results have followed.

Another method which has given good results, two cases, is that of MacEwen. He introduces long aseptic needles into the aneurismal sac and scratches the posterior wall. He then leaves them in for a time without using electrolysis. They are usually left in from six to eight hours. Other Scotch surgeons (Thompson and Buchanan in the Glasgow Medical Journal) report favorable results. Bannele's case had thirteen introductions of the needle. Both carotids had been spontaneously obliterated and the right subclavian had been unsuccessfully ligated. The needling produced a very good effect. The aneurism, which was the size of a hen's egg, disappeared completely and the patient remained completely cured one year.

The surgical measure that has shown the best results of all, is that of distal ligation of the artery. Naturally the proximal ligation is impossible to make. Wardrop, who first did this in 1821, operated by ligating the right carotid in a case of aortic aneurism and obtained a very good result, the patient surviving for six months after the operation. There are various methods of making this operation. We have first the simultaneous ligature of the right carotid and subclavian. We can ligature these arteries at two different periods. We have the ligation of the right carotid only and the ligation of the right subclavian only. All these ligatures of the right side are for aneurisms of the first part of the aorta or the first part of the innominate artery. As for aneurisms such as we have seen this evening, aneurisms that have not extended farther than the middle part of the arch of the aorta, we could ligate the left carotid and subclavian in two stages or simultaneously ligate the left carotid and left subclavian. Of the simultaneous ligation of the right carotid and subclavian there have been 32 cases in literature. There were fourteen cures, five improvements, five not improved, and eight deaths after the operation. Of the ligation of these arteries at two different times there have been published four cases, with three improvements and one death. Of the ligature of the right carotid only there were six published with three cures and three deaths. These operations were all done under circumstances not so favorable as exist at present. We now have better methods at our command and they give better results. I only quote those cases operated upon under antiseptic methods. Of the ligature of the right subclavian alone there was one successful case. There were six cases of ligation of left carotid alone resulting in two cures, two improvements and two deaths. Of the ligation of left carotid and subclavian in two stages there was one case, which died. Simultaneous ligation of the left carotid and subclavian up to 1886 had not been made. From 1870 to 1892, Jacob operated upon 69 cases by ligation with this result: 36 cures, 29 of which persisted longer than a year, seven were improved, four were not improved and 22 died within three months after the operation. From 1892 to 1899 there were ten cases reported, of which eight cures resulted, and one temporary improvement and one death. In all these 79 cases of Jacob the simultaneous ligature of the carotid and subclavian has been applied. From statistics there is no doubt that this method of simultaneous ligature of the carotid and subclavian is the best. It is true however that where advanced arteriosclerosis can be diagnosticated there is not much hope of benefit from this treatment. In the great majority of instances the first symptoms of thoracic aneurism come from aneurism of the innominate coexisting. There has never been demonstrated a case of isolated aneurism of the innominate and I believe that, as a distinct entity, it should be eliminated from literature. The statistics just quoted show clearly that of all methods the simultaneous ligature of the carotid and subclavian is the one to choose and as with our present methods this is not such a dangerous procedure, we ought never to hesitate to try it.

THE PREVENTION AND TREATMENT OF ACUTE GENERAL PERITONITIS.

By **Wallace A. Briggs, M. D.**, Sacramento, Cal.

Read before the California Northern District Medical Society.

Their frequence, gravity and undetermined treatment, endow diseases of the peritoneum with especial interest and importance. Particularly is this true of peritonitis, which, in the majority of cases, perhaps, a surgical at the outset, in others, at various stages of their progress, becomes so, and in yet others, during their entire course, remains under the exclusive charge of the physician, but always, whether medical or surgical, first appeals to the general practitioner.

It behooves the general practitioner then, not only to master the medical aspect of these cases but also to familiarize himself with the indications for surgical intervention. If this be true of the treatment of peritonitis it is none the less so of its prevention and in peritonitis the great and increasing province of surgery is prophylactic rather than curative.

That peritonitis is practically always of microbic origin, is a conclusion which, in the present state of our knowledge, even the conservative mind can hardly escape. Practically, I say, for, at least in medicine, sweeping generalizations are full of peril to the intellectual integrity of the individual, to the welfare of the multitude and to the progress of science.

But whatever else idiopathic peritonitis may be, it is probably not rheumatic—rheumatism in all likelihood being itself a microbic disease. Other inflammatory diseases which formerly were etiologically inexplicable, except on the assumption of idiopathy, are now more rationally viewed as infectious and thus the field of idiopathic inflammation has been narrowed almost and yet, in the opinion of many, not quite to the vanishing point.

Under certain conditions, however, the peritoneum has enormous powers of resistance to infection—absorbing large quantities of bacteria and their toxins without inflammatory reaction. Grawitz, as quoted by Curtis, injected into the peritoneal cavity, without evil effects, as much as 10 cc. of water rendered distinctly cloudy by pure cultures of staphylococci and streptococci. Pure cultures of saprophytic bacteria are likewise innocous even when injected with a small quantity of albuminoid material. If this material exceed the immediate absorptive power of the peritoneum, septicemia, but not peritonitis, results. Similarly with the bacterial toxins and intestinal ptomains—they may produce septicemia but not peritonitis.

Something more, then, than the mere presence in the peritoneal cavity of pathogenic bacteria is ordinarily necessary to excite peritonitis, that is, a suitable soil for bacterial life so that bacteria and their toxins are produced more rapidly than they can be absorbed by the peritoneum and thus accumulate and, by continued irritation, excite inflammation. Such a soil may be furnished by the contents either of one of the hollow viscera of the abdomen or of neighboring cysts or abcesses, entering the peritoneum through rupture or perforation; by blood, necrotic or abraded tissues and by peritoneal exudates. The conjunction in the peritoneal cavity of the seed and soil necessary to the production of peritonitis may be brought about in various ways. They may be introduced conjointly as by infected pus, or separately as by sterile pus or exudate infected by bacteria conveyed either by the blood of the patient or by the instrumentality of the surgeon, or bacteria may be introduced at the same time that the soil is prepared *in situ* by the surgeon, as by abrasions, contusions, strangulated tissues, *et cetera.*

Infection of the peritoneum may take place:

1. Through the circulation, the so-called hematogenous peritonitis, of which the pneumococcus peritonitis is one of the most marked examples. Such cases were formerly regarded as idiopathic.

2. Through an external wound whether operative or accidental.

3. By migration of bacteria through the congested, inflamed, strangulated or gangrenous wall of any of the hollow viscera of the abdomen.

4. Through the fallopian tube by continuous propagation along the mucosa to the peritoneum.

5. Through a wound or perforation of any of the hollow organs of the abdominal or pelvic cavity.

6. Through an erruption of infectious pus from neighboring organs.

When the peritoneum once becomes inflamed in however small an area, infection may spread by the motility of the bacteria themselves, by capillary attraction, by gravity, by peristaltic movements of the bowels, by movements of the diaphragm, the abdominal walls and lastly of the body as a whole, acting in some one of the ways just enumerated.

Peritoneal infection is generally multiple. Much difference of opinion exists as to which are the most important agents of infection, but evidence seems to be in favor of the streptococcus, bacillus coli and gonococcus.

In the prevention of peritonitis, the chief thing is the relief, either medical or surgical, of diseases which threaten the peritoneum. Easily first among these diseases, at least in general practice, is appendicitis whose only danger is from peritonitis and its consequences, either immediate or remote. This is not the place for an extended discussion of either the medical or surgical treatment of appendicitis but, in passing, I cannot refrain from expressing the opinion that both are too often neglected. Both recurrent and chronic appendicitis of any severity, acute appendicitis not convalescing within twenty-four hours, and all forms of perforative, gangrenous and suppurative appendicitis are, it seems to me, incontestibly surgical diseases. In all of them, both morbidity and mortality are materially diminished by skilful surgery. The proper medical treatment of nonsurgical cases of appendicitis—of mild relapsing and chronic cases, of first attacks not promptly convalescing—should be strictly enforced. The proper treatment of enteric fever almost, if not quite, prevents the possibility of perforation and consequent peritonitis as does also, with little less certainty, the proper treatment of gastric and duodenal ulcer. But time forbids the further consideration of this subject. Suffice it to say that the skilful physician will guard the peritoneum at every point.

Next in importance in the prevention of peritonitis are a perfect *technique* in operations involving the peritoneum either directly or indirectly; a minimized septicity of the gastro-intestinal canal; the strictest asepsis guarded by antisepsis; approach of the infected foci by the way least likely to endanger the peritoneum; the least possible thermic, physical or chemical violence to the peritoneum; the strangulation of as little tissue as possible—ligature of individual vessels instead of ligature *en masse;* the least possible soiling of the peritoneum with blood or the contents of cysts, etc.; the covering in of raw surfaces; the use of absorbable ligatures—avoiding silk particularly; thorough toilette of the peritoneum and, in suitable cases, drainage.

Finally the hygiene of digestion will prevent that small contingent of cases of peritonitis due to the migration of bacteria or the osmosis of their toxins through the bowel wall.

The indications in the treatment of acute peritonitis are (1) to remove its cause; (2) to limit its extent and moderate its intensity; (3) to limit the production and absorption and promote the excretion of toxins and ptomains; (4) to support the powers of life; (5) to evacuate pus. Surgery rightfully claims the first and the last of these indications, medicine the others, but when we turn from the abstract to the concrete aspect of these indications, from principles to their application, the line is hard to draw, and confident, aggressive, modern surgery constantly encroaching on the realm of medicine now lays claim to the peritoneal cavity as its own exclusive appanage. Without presuming to prescribe any hard and fast lines, I believe that in the treatment of acute peritonitis something yet remains and justly remains to medicine; for instance, gonorrheal peritonitis ordinarily throughout its course, the first twenty-four hours and the declining stage of migration peritonitis and the presuppurative and the resolving stages of pelvic and also of hematogenous peritonitis.

To surgery on the other hand clearly

belong perforative and purulent peritonitis, fulminating appendical peritonitis, acute appendical peritonitis not resolving within twenty-four hours, relapsing and acute progressive pelvic peritonitis.

In the medical treatment of acute peritonitis, food by the stomach should be entirely suspended from the first. Bacteria assail the peritoneum not through normal, traumatic or pathological apertures only—through the tubes and perforative wounds and ulcers—but also through the structurally intact bowel wall. In cases of acute appendicitis, with neither gangrene nor perforation, colon bacilli and other bacteria are found on the peritoneal surface of the appendix. Under similar conditions, bacteria may traverse the living walls of the bowel and thus excite a local or even general peritonitis. In peritonitis always, and in its causative conditions generally, impaired digestion exists and predisposes to fermentation and putrefaction of the ingesta; gas develops and distends the intestines, impeding the local and general circulation; bacteria multiply enormously, invade the intestinal mucosa and muscularis and finally the peritoneum itself; the muscularis succumbs to distension, imperfect circulation and nutrition and at last, infection; functional obstruction and intense sapremia set in and the patient is lost.

Except in occasional cases of fatal shock, acute peritonitis kills always by toxemia—never by inanition—and of this toxemia the ptomains of gastro-intestinal putrefaction not infrequently furnish the fatal increment. I wish to emphasize by repetition my belief that the condition of the alimentary canal often determines the outcome of acute peritonitis. Rectal feeding should take the place of stomach feeding but not until after from 24 to 36 hours of absolute fasting.

Alimentation by the rectum, supplemented in extreme cases by the subcutaneous tissue, to the entire exclusion of the stomach, solves the question of nutrition in these cases as best it may be solved. A full meal by the rectum may consist of two eggs, one-half pint of warm milk, two tablespoonfuls of milk sugar and four ounces of warm water, well mixed with the contents of one peptonizing tube (Fairchilds) and fifteen grains of powdered napthalin. In prolonged rectal feeding, an antiseptic is indispensable. Without it, the nutrient enemata swarm with microörganisms and, carried as they sometimes are by reverse peristalsis into the small intestine or occasionally even into the stomach, may produce the very troubles which this method aims to prevent. Of the various intestinal antiseptics, napthalin seems the best for rectal use. Generally it darkens the urine but, as far as my observation goes, without irritating the kidneys or producing any other untoward effect.

From one to three injections, such as I have just described, should be given daily either in single or in divided quantities as indicated by the tolerance of the bowel. The colon should be irrigated every second day with hot water and turpentine or milk of asafetida.

In case of offensive or stercoraceous vomiting, both the stomach and the colon should be thoroughly washed out—repeatedly if necessary. Several times in acute peritonitis I have witnessed great relief from this procedure and twice I feel positive the saving of life. It is a rational procedure, amply justified by practical results.

If the bowel become intolerant as it sometimes does, particularly in pelvic peritonitis with implication of the rectum or sigmoid flexure, nutrient injections may be made subcutaneously. A safe injection, if properly prepared and given, is an ounce of milk sugar dissolved in a pint of normal saline solution.

As a rule, I have kept up rectal feeding from one to three weeks; in mild and abortive cases a few days less may be sufficient but stomach feeding should never be hastily or suddenly resumed, on the contrary, always cautiously and tentatively.

It is related of the elder Gross that, in emphasizing the value and importance of rest in the treatment of inflammation, he would exclaim in his most impressive tones and manner, "Rest! gentlemen, rest! for God's sake, rest!" If he said this of inflammation in general, what might he not have said of inflammation of the peritoneum, and rest in peritonitis is comprised in one word — opium. Opium puts at rest the brain, the nerves, the body, the stomach, the intestines, in part the respiratory muscles and, as the result of all this, the peritoneum itself. In acute peritonitis, rest of the peritoneum is doubly imperative, first, on the same grounds as in any other important inflammation, and second, because, until the borders of the inflamed surfaces agglutinate, their every movement spreads infection still further.

Of strictly medicinal means, opium, I believe, has been rightly denominated our sheet anchor in peritonitis. It should be given by the rectum and hypodermically often enough and in sufficient quantities to maintain its full and equable physiological effect—to relieve pain; quiet intestinal peristalsis and body movements, check vomiting and quiet respiration but without inducing profound narcosis.

Quiet should be secured not only by opium but also by the voluntary coöperation of the patient and the watchfulness of the nurse—the room should be darkened and quiet; visitors should be absolutely excluded; the utmost quiet, mental and physical, should be strictly enforced; cough, hiccough, retching and vomiting should be prevented; the dorsal position should be enforced and the catheter should be used if the bladder cannot be emptied spontaneously without straining.

Recently an attempt has been made, but I venture to believe mistakenly, to rescue saline purgatives from the oblivion into which, in peritonitis, they had so properly fallen. By promoting absorption from the peritoneal cavity, clearing the intestines from gas and decomposing food, and preventing or relieving reverse peristalsis and functional obstruction, it is true that the early administration of salines in appendicitis and after operation involving the peritoneum is sometimes followed by seemingly brilliant results but generally by the prevention of a threatened or the relief of a simulated rather than the cure of an actual peritonitis. It has a very limited application, however, chiefly, if not only, in the very incipiency of actual or threatened peritonitis, is capable of great and serious abuse and may be countenanced only to clear the bowels of gas and undigested and decomposing food which seriously aggravates or, by its symptoms simulates, a threatened or incipient peritonitis.

Cold externally over the seat of the inflammation relieves pain and hyperemia and prevents or diminishes the effusion of nutrient material and the consequent aggravation of the inflammatory process. It should be applied at once, continuously and vigorously, over a considerable area and always by Leiter's coil. No other method of external refrigeration compares with it in facility, comfort and efficiency.

As toxemia is the chief source of danger in peritonitis, excretion should be vigorously promoted. Water should be given by the stomach as freely as can be borne and if marked evidences of toxemia appear, by rectal and by hypodermic injection also. Normal saline solution may be given by the rectum to the limit of toleration and subcutaneously in quantities of a pint every three to twelve hours. By the simultaneous and vigorous use of the ice coil perspiration may be controlled, arterial tension maintained and toxins in large amounts may be forced through the kidneys to the great relief of the nervous system. The importance of excretion in septicemic conditions, is generally overlooked or neglected. Let me again insist that in all but the fulminating forms of peritonitis death is invariably due to toxemia. The rapid and constant elimination of ptomains and toxins, therefore, is an essential element in any rational treatment of this disease.

Shock in perforation or other fulminating form of peritonitis should be treated by the usual means—lowering of the head, elevation of the foot of the bed, strychnine freely and normal saline solution in large quantity hypodermically, and a rectal enema of a quart of saline solution at a temperature of 120° or 130° F.

Tympanites should be relieved by hot turpentine enemata and the rectal tube passed well up into the colon and left for some time *in situ*.

To minimize the evil effects of the toxins of peritonitis, streptococcus serum would seem to be indicated. Whether it has been used for this purpose and, if so, with what results, I am not aware.

The indications for surgical intervention in acute peritonitis are to remove the cause or the focus of disease and to evacuate pus. The latter indication is a law of surgery universally recognized and of universal application. The only questions possible here are as to the time and method.

In dealing with local suppurative peritonitis, particularly about the appendix, many advise and practice delay until the abscess cavity is presumably large enough to permit removal of the appendix without rupture of the sac and general infection of the peritoneum. The dangers of delay are (1) septicemia and pyemia; (2) extension of the abscess into the pelvis, flank or other undesirable situation; (3) the formation of other abscesses, near or distant; (4) necrosis of the bowel wall; (5) more extensive adhesions; (6) rupture. The positive dangers of delay, it seems to me, far outweigh its possible advantages. Pus, therefore, should be removed from the peritoneum as soon as its presence is recognized. In local peritonitis this can be done by a simple procedure of incision, removal of the focus of disease when practicable, cleansing of the abscess cavity and drainage. In general peritonitis, however, it is far otherwise. The extreme sapremia, the vast extent of the disease and the enormous distension of the bowel make the operation one of great danger and difficulty. These must be incurred, however, as death is their alternative.

The approach in these cases will depend somewhat on the site of the original lesion. In a case of general purulent peritonitis developing for instance from the appendix, and incision large enough to admit the hand should be made over the appendix and parallel with the fibers of the external oblique. Pus should be quickly wiped out, the appendix removed, and the peritoneal cavity carefully explored for limiting adhesions. If these enapsulate the abscess, they should be respected, the cavity thoroughly cleansed with sterile normal saline solution and carefully drained. If limiting adhesions do not exist, a corresponding incision should be made in the left side, the abdominal cavity thoroughly irrigated and a combined drain and irrigator introduced from either side into the pelvis, the flank and under the omentum to the transverse colon. Through these combined drains and irrigators, the abdominal cavity should be carefully but thoroughly flushed every three or four hours with normal saline solution at a temperature of 105°. They should be left in place for two, three or four days or until the peritoneum seems able to cope with slight remaining infection.

But frequent suppuration in acute peritonitis is an evidence of surgical neglect or incompetence. Pus in the peritoneum should be prevented rather than evacuated. This leads us to the first indication and the surgical treatment of acute peritonitis—the removal of the cause or the focus of the disease. Operation must be done at the very earliest possible moment permitted by the condition of the patient in every case of perforative wounds of ulcer of the stomach, gallbladder or intestines; of fulminating perforative or gangrenous appendicitis, of acute appendicitis not convalescing within twenty-four hours of its outset and of recurrent, relapsing or chronic appendicitis, of any severity. In pelvic peritonitis, on account of the greater tendency to resolution and limitation, operation may be judiciously deferred either until the acute symptoms subside or until the disease manifests a tendency to progressive or saltatory extension. These cases may often be wisely approached from the vagina and treated radically and yet conservatively.

212 J Street.

PRACTICAL POINTS IN OBSTETRICS.

By Charlotte B. Brown, A. M. M. D.,
San Francisco, Cal.

Read before the Alumnæ Association of the Woman's Medical College of Pennsylvania.

The woman physician of to-day can hardly realize what she owes as an obstetrician to the faithful teaching of the professors of obstetrics in the Woman's Medical Colleges of Pennsylvania and New York. In saying this I want to include the patient individual training which the resident physicians of the Woman's Hospital of Philadelphia, the New York Infirmary and the New England Hospital have given their internes in that branch ever since those institutions opened. There will never arise a question as to woman's right to this specialty, and we all owe a debt of gratitude to those early women doctors who gave us a good groundwork in the art and science of obstetrics. Let us then by every endeavor strive to advance this specialty.

Realizing this, I take up the subject under three heads: (1) The care of the pregnant woman; (2) Anesthetics in labor; (3) Gynecological after-care of each parturient woman as a prophylactic measure.

I shall add perhaps but little to your knowledge, but I wish to emphasize, from a long experience some of the details which make successful obstretricians, and I invite free discussion of my paper.

The Care of the Pregnant Woman.—When obstetrics has become a true science, every woman who conceives, will seek her physician, and be thoroughly looked over. First, as to her pelvic measurements, her vigor, muscular as well as nervous temperament, her functions, excretions, secretions, diseases she may have had in childhood, and her organic tendencies. She will then be counseled as to her life, which will be as far as one can direct it full of healthfulness in diet, exercise and sleep, and she must be advised as well in her emotional life. She may continue her mental and physical interests in their varied directions as she has been accustomed to maintain the highest standard of her own health. To do this she has no right to trust her own feelings. An overlooking from time to time by her physician should be considered a necessity. To be kept well should she require of her accoucheur, not to get well. At these periodic consultations, say bi-monthly after the careful first examination, inquiry should be recorded of the functional condition *seriatim* of the whole economy, and careful advice given for any deviation from normal health.

Examination of the urine should be made at the first interview, for it is not by any means uncommon to detect in this first urinalysis a nephritis of scarlet fever or diphtheria in early childhood, unsuspected in the apparently healthy woman, and the hope of a successful termination of labor depends on its early diagnosis. The examination of the urine in pregnant women at this stage, and indeed I find in the majority of women, needs care. I have grown to realize how many women excrete too small an amount of urine in 24 hours; they drink too little. The sp. gr. varies too greatly and I now insist when the first specimen is sent, on having the whole quantity for 24 hours, with a statement of the number of times of passing it. If any abnormality in quantity occurs, I require the patient to measure it herself at the end of each 24 hours, keeping a record of the amount with the date. The examination of this first specimen having been carefully noted and found normal, a three ounce bottle of morning urine is sent to the office once a month. The patient herself understands the importance of color and quantity.

The value of exercise to the pregnant woman cannot be overestimated. Woman's work as a housekeeper does not give her proper exercise. Ideal is the well appointed home where she does her own work in a healthy, airy cottage, doing her own marketing and surrounded by friends who stimulate a healthful out and indoor life. Unfortunately such surroundings are too rare. The manifold duties indoors are too often fatiguing and it is easy to find excuse in dread of publicity, bulkiness and the fear that standing or walking may produce pathological conditions, till disuse of the limbs, their swelling and lameness cause her to remain constantly indoors. The condition of the abdominal and uterine muscles and the character of the labor are markedly better in a woman who has taken a full amount of exercise during her pregnancy.

Light calisthenics and later some chest weight exercises with a teacher, are of great value in early pregnancy to the flabby girl-wife whose suffering with nausea inclines her to yield to it. Five to twenty minutes exercising night and morning will work wonders in making her feel life is worth living, and in my experience exercise is much more satisfactory than massage. Walking a gradually increasing distance up to 2 or 3 miles daily may be continued nearly to full term. Wheeling where it has been a habit, has done well in several primiparæ of 35 to 38 years, and up to 7½ months it is not objectionable. A little care as to dress, quiet paths and good company should obviate any cause of comment.

Bathing is indispensable to health. A quick daily sponge or plunge bath with good rubbing should be the rule.

The drinking of a full amount of pure

water daily should be required. The French suggest the use of a quart of water between 3 and 4 p. m. daily. One takes this quantity easily after a little practice, or a full glass of water an hour before meals and at bed time, drinking very little at meals. The beneficial action on the skin, kidneys and bowels is very soon appreciated. Indeed this rule applies to many patients. The habit of drinking too much at meals or else omitting water from one's diet list is too common. We should need less diuretics and laxative if we trained our girls in this respect.

To sum up my first point in a few lines, the careful first examination of all cases of pregnancy, out of door life, bathing and the drinking of water, should bring the woman to a normal labor in a healthful condition.

I have been much gratified in noting the advantage to the patient of a quiet rest for a week before labor, withdrawing herself from the care of the household and passing a time in quiet life, full of as much happiness as may be. I realize this is often hard to do in a family, but it is a strong inducement for small private maternities where mothers of families may go for their confinements, where a vacation from home makes "having a baby" seem rather a pleasure than a dread. The after-care in such cases and protecting the mother from the friction and excitement of life are very beneficial. Family and friends for the first month of baby's life are often a menace by their attentions.

Anesthetics in Labor.—Yes, furnish your baby basket with a two-ounce bottle of Squibb's Chloroform is *the* rule to the primipara. I take as my perquisite the balance of the bottle after the case, to prevent any accident from carelessness should it remain in the medicine closet, and also to furnish it to the poor woman who could not afford to buy it. Generally the two ounces serve for three ordinary labors. It is one of the niceties of experience to know when to begin its use. Not as long as the patient can keep up, and with courage bear the increasing pains and the fatigue of labor. When the dilatation is slow, it is surprising to note its rapid progress under decided whiffs of chloroform during a few pains. You all know the value at this stage of an hour or two of sleep induced by 30 grains of chloral administered in lumacacia *per rectum*. It may be given with a two-ounce hard rubber syringe without the least annoyance to the patient, and proves valuable in assisting the action of the chloroform later. I speak earnestly for chloroform preferably to ether except in prolonged obstetric operations because it is more agreeable, its irritation to the kidneys is less, and because the shock of labor is largely avoided by its use.

Shock is a point to be dreaded in the primipara and it is not sufficiently emphasized by our teachers. It has been my experience to find labor in very young primiparæ, say of 15 years, quite as difficult or more so than than in the primipara of 38 years, and the prostration is greater. This has seemed to me to be due to shock, and I believe all means at our command should be used in the first stage to conserve the forces. Too often apprehension of pain acts to delay labor and a certain amount of anesthesia causes the pain to be assisted instead of resisted. It is my habit at this stage to give the chloroform on a handkerchief, a few drops at the beginning of each pain, adding a fresh supply myself each time. By this means the patient is able between pains to converse a little until near the end of her labor when I give the anesthetic to an assistant and by the mask and drop method crowd it to sound sleep. No greater satisfaction in a lying-in chamber comes to me than to hear a primipara say after delivery, "I have no dread of a second child. I remember nothing fearful and am quite willing to go through it again with chloroform." Shock under these conditions is almost unknown.

Following the teaching of Fordyce Barker, to whom we owe so many valuable suggestions, I have found chloroform of great value in the labors of women suffering from organic heart lesions as well as in the very delicate women, for they cannot endure suffering safely. The danger of *post-partum* hemorrhage is given as a reason against its use, but it is my rule whenever pains are feeble and progress slow, in labor, to give quinine or strychnine in full doses, so that I rarely use any ergot, and beyond holding the fundus for an hour after delivery of the secundines no symptoms needing interference on account of bleeding have occurred to me. For a couple of hours after labor there is sometimes considerable flow; a hot douche, a snug binder, or rarely an ice bag, may be needed to control it, and the flow becomes normal in amount by six hours after labor. I have never seen an alarming hemorrhage after chloroform.

Injuries of both cervix and perineum are largely prevented by its use. It is my rule to give it freely as the child's head emerges from the cervix to prevent a sudden expulsion of the head and the acompanying laceration, and also during expulsive pains at the vulva, because if the patient is unconscious during these last few pains, the head may be guided through the outlet between pains often preventing any break of the mucous membrane.

If repair should be necessary, most careful approximation of the parts may be secured with but a slight additional amount of the anesthetic if any, and it is very wise before the patient recovers to examine the anus, for if there is much congestion or a fissured or varicosed condition, to introduce the thumbs and thoroughly dilate the sphincter takes but a moment, and the patient is cured of chronic hemorrhoids. I treat these parts afterwards for a few days with compresses of hot hamamelis extract, an application that also does much to relieve the contused soft parts. There are not infrequently lacerations on either side of the vagina anteriorly which seem to me if not repaired, to become the cause of cystocele in later years. They unite very readily with a continuous catgut suture.

I want just here to urge on the young practitioner the importance of placing the patient who must have repairs, on a table in a good light, and using thorough asepsis; give yourself a good chance. This can be done in any lying-in-room, if one has made a little preparation in advance, with much less fatigue and discomfort to the doctor and far better results to the patient. In my experience it is better to use a table also in instrumental delivery. The ordinary bed does not afford the chance to assist the patient as well as a table with good helpers and is very hard on the doctor.

The nonuse of the catheter in the after-care of the patient is another point I want to impress. If you would spare your patients much after suffering avoid catheterization even in seemingly extreme case; most of the irritable bladders are the result of it. Teaching the woman beforehand to use a bed pan will be one step in prevention, and moral suasion is of great use; obliging the patient to wait some times seems cruel, but is rewarded in the end with a convalescence without urethral irritation. An early use of the commode is advisable in all normal cases, as the upright position drains the vagina better, and this can easily be done with but slight fatigue, or the patient may be turned on her knees. I do not believe however it does harm to permit the feet to touch the floor and for the nurse to turn the patient about on to a commode. Among the Chinese and Japanese, women always rise from the bed to empty the bladder, and no evil effect results, for they remain quiet as long as do our country-women after labor.

Gynecological Care After Labor.—Every patient should be examined on a table in three weeks or less after her labor so that her doctor may know the position and size of the womb, of any unhealed lacerations, and also the condition of the vagina. Replacement of a retroverted womb in the knee chest position can easily be affected at this stage, and often no support will be needed. Dry boracic acid or an alum or tannin tampon every four days, for a few times will cure the relaxed thickened vagina; a prolonged metrorhagia will respond to a few iodine swabbings of the cavity of the uterus; brushing over unhealed lacerations with a solution of nitrate of silver will cure them; constipation, too, is improved by the treatment of the vagina. Gentle bed calisthenics, after three weeks, improve the tone of the pelvic viscera. Five to ten minutes night and morning before one can do much walking does good in toning up the relaxed abdominal muscles. These may be modifications of the horizontal exercises of the gymnasium.

It is my rule to get ordinary labor cases out to ride, if it is feasible, by three weeks, even if they are very delicate and must be carried upstairs on return. This does not allow the return to family and social life, but daily out of door life and careful rest after it causes a convalescence of 4 to 6 weeks to be followed by a perfectly healthy condition of the mother. No gynecology will be needed for women for whom we have cared in this way. Prevention is better than cure.

1212 Sutter Street.

HOSPITAL NOTES.

CALIFORNIA EYE AND EAR HOSPITAL.

By Louis C. Deane, Surgeon to the Hospital.

ON THE USE OF EYE DROPS.

The field of action of a collyrium may be separated into two divisions, the palpebral and ocular conjunctiva and the corneal epithelium, and secondly, the deeper structures of the eye, as the iris, ciliary muscles, etc.

The mode of application of a collyrium varies with the object to be obtained and is somewhat interesting from a therapeutic standpoint.

To immerse the face in a bowl of medicated water and open the eyes is one method which would hardly commend itself on account of the amount of collyrium necessary to accomplish this end. To carry a smaller amount from a basin to the eyes in the palms of the hands is another means. The use of an eye cup shaped to fit closely over the orbit, to be inverted so as to bring the medicated solution in direct contact with the open eye is a well tried method. Also, more crudely, to apply the open mouth of a bottle to the everted lower lid and thus allow the collyrium to reach the conjunctiva. The more modern use of the pipette is certainly the most economical and effective method and the use of this little device is again as varied as are the collyria themselves.

To put a drop on the everted lower lid, or in the outer or inner canthus, to inject a few drops upwards under the upper lid, to point the pipette directly at the cornea with momentary fear on the part of the subject, or to gently allow a drop to flow over the cornea from above, are a few methods in use.

In this short article I wish to point out what I consider a few essential factors in this most popular, though often ill-used method of medication. That the cornea is not only the most delicate but also the most sensitive surface of the body, and nature's methods for its protection are in constant evidence, is one factor that presents itself most forcibly in the use of a collyrium. Thus the irritable nature of the drugs should be considered, as, for instance, homatropine and scopolamine, both of which have equally intense actions, while the latter is absolutely non-irritating. The use of boracic acid, in conjunction with astringents, mydriatics and myotics, aside from its own antiseptic action, renders the collyrium more bland. Next in importance is the temperature of the solution. The use of a cold drop so shocks the cornea as to produce a violent closing of the lids, the drop thus being expelled. To draw a small amount into the pipette and heat it for a moment over a spirit lamp or a lighted match warms it to the body temperature without changing its chemical action to the slightest degree; thus warmed, aside from lessening the shock in its application, it intensifies its action several fold by allowing it to be retained and more readily absorbed. An easy and effective method for a patient to apply a drop in his own eye is to place the pipette in a vertical position against the brow with the end on a line with the inner canthus, then throwing the head directly backwards in a horizontal position, squeezing the bulb, a drop falls on the inner canthus and by blinking the lids, it passes over the eye, by raising the upper lid and drawing the lower down with the finger, the action of the collyrium extend back to the fornix. Where a drug is intended to act on the cornea or penetrate through it to the deeper parts, it is advisable to allow the drop to flow directly over it, as in the use of cocaine, atropine, scopolamine, eserine, pilocarpine, etc. This is accomplished by standing behind the patient, raising the upper lid from the brow with the first finger of the left hand, directing the patient to look at his feet and allow the drop to flow over the cornea from above. This is greatly facilitated by warming the drop as described above.

L. C. Deane.

GELATINE IN OBSTINATE NASAL HEMORRHAGE.

Gelatine was first recommended by French authors recently in the treatment of aneurisms, later as a styptic agent in various forms of internal hemorrhage. Its efficacy appears to be due to its action in coagulating the blood, though in what this action consists, is at present a matter of conjecture. In the "Deutsche Mediginische Wochenschrift" of December 7, Bauermeister reports that he has tried it with successful results in hemorrhage of the intestinal tract of the lung and of the kidney, administering the remedy internally and likewise, in several cases of severe nasal hemorrhage, applying it locally. In these later cases, the hemorrhage which did not yield to the usual styptic nasal tampons, ceased immediately on the introduction in each case of a gauze tampon impregnated with corrosive sublimate gelatine. In the same issue Frendenthal gives a detailed account of a similar case in a woman of 68, in which the persistence of the hemorrhage in spite of every attempt to overcome it, brought on syncope, extreme anemia, and stoppage of the pulse, which returned only after the subcutaneous infusion of half a liter of physiological saline solution. We then irrigated the right nasal cavity with warm physiological saline solution to remove the fresh blood as well as the coagula, immediately after which he injected into it 20-30ccm. of fluid warm gelatine. This had been prepared by dissolving six tablets of white gelatine in a cup of boiling water, which was then allowed to cool somewhat, when it was introduced into the nose by means of a warmed glass syringe with a large aperture. The gelatine soon solidified, whereupon the hemorrhage ceased instantly and did not recur. Considering that in these cases gelatine was tried only after everything else has failed, it would seem that we have in it a styptic agent of the very first rank.

R. D. Cohn.

A SEROUS FORM OF MENINGITIS OF OTITIC ORIGIN.

The existence of a serous form of meningitis has been recently established, and also the fact that, like the suppurative form, it may originate in an otitis or its consequences, and compel surgical intervention. Mueller describes two observations. In both, the diagnosis of a cerebral abscess consecutive to otitis had been made, but no abscess was found when operated on, and yet both patients were cured by the mere fact of the intervention. The correct diagnosis proved to be meningitis externa serosa chronica in one, and serosa interna acuta in the other. The symptoms in the first indicated a compressing cerebral abscess, and the sensitiveness of the left mastoid process in connection with a preceding otitis treated by curetting the antrum left but little doubt that the trouble had originated from the ear. The slow pulse and congested retina suggested compression inside the skull, while headache, motor weakness, hypoesthesia of the right side, vomiting, vertigo, numbness and slight elevation of temperature fitted into the picture of a temporal lobe abscess, although there was no aphasia. The absence of stiffness in the neck and high fever and the regular pulse, militated against suppurative meningitis. No pus was found, but the amount of serous fluid indicated a pathologic increase, especially the abundance that gushed when the hard membrane was incised, and the amount that continued to exude for days afterward. The affection was evidently a suppurative meningitis in its incipient stage of hyperemia and serous effusion. The chronic character was evidenced by the long-continued headaches that had preceded the intervention, and the fact that all of the symptoms were not cured; the disturbances in gait and equilibrium still persist, showing that permanent lesions had been induced, and recent vomiting and vertigo suggest that the process still continues in a mild chronic form. Mere incision of the brain membrane and draining, however, saved the subject's life, and Mueller advances reasons for preferring this procedure to lumbar puncture in this and similar cases. In the second observation the diagnosis was still dubious for weeks after the intervention. The brain matter protruded through the incision and portions of it kept necrosing and dropping off, until a most remarkable amount of brain substance had been lost without apparent injury. The threatened symptoms induced by the compression of the brain lost their intensity from the moment the brain was incised and the compressed brain substance found an opportunity to stretch and loosen. The hernia of brain matter gradually subsided, the serous effusion diminished and the patient recovered without incident. This case emphasizes the advantages of the method always followed by the writer of never operating on an otitic cerebral abscess through the wound in or by the ear, but always entering from without, beyond, where hernia, etc., are under control.—(Deutsche Medische Wochenschrift.)

Redmond Payne.

REPORT ON THE REMOVAL OF ADENOID GROWTHS.

At the Sixth International Otological Congress held in London in August, 1899, P. Rudloff (Wiesbaden) read a paper on the operation for the removal of adenoid growths with the head hanging over the table, while the patient is under the influence of chloroform. The author first drew attention to Rose's method of performing operations on the hanging head in cases in which there is danger of blood suction. Adopting this method, which excludes the dangers arising from the aspiration of blood and tissue, he described his method which he had employed during the last eleven years. His experience included over 700 cases. He advocated the free administration of chloroform and employed Boecker's and Hartmann's curette in performing the operation. In describing the method of operation, he drew attention to the following points: 1. Adenoid growths occasionally have their origin in Rosenmuller's fossae; in removing them it is important (a) to avoid injury to the pharyngeal orifice of the eustachian tube; (b) to bear in mind that the tissue surrounding the carotid artery extends into the lateral wall of the fossa and that danger of injury to this artery is to be guarded against. How necessary this warning is, is proved by the case recorded by Schmiegelow.

2. Adenoid growths must be thoroughly removed (a) in order to avert as far as possible the danger of recurrence (b) because a certain percentage of the cases which occur are tubercular.

3. If the tonsils are enlarged, it is advisable to remove them some time previously. His statistics recorded a recurrence of three and a half per cent.

L. C. Deane.

Purpura Hemorrhagica.

Abstract of Paper read before the San Francisco Academy of Medicine.

Purpura Hemorrhagica, with unusual blood changes, was reported by Dr. Kerr. Man, age 55; no family history of hemophilia. Had a chancre 25 years ago, which was soft and for which he was treated. Always bleeds freely when cut; noticed this several times. Has not been out of San Francisco for five years. Had acute articular rheumatism 12 years ago. Present trouble: October 4th, had fever followed by chill; recurred for several days; then got better, but profuse sweating remained. With advent of fever, feet and legs edematous; urine irritating and high colored; pain in back, ankles, knees, elbows, which were also swollen. Third day of fever, legs began to itch; red blotches apeared; these later turned black. Considerable itching; no elevation above the skin; large patches ruptured and bled. On third day of eruption, while walking, was struck by a bicycle; contusion in right infraorbital region resulted; two days later nose bleed began; small at first, later marked. Had been constipated up to this time; now bowels became very lax and stools dark in color. Fourteen days from beginning of fever, 10 from the time of initial eruption and four from initial hemorrhage, he came to the City and County Hospital. Persistent hemorrhage from right nasal cavity, lips, a spot on the soft palate, another in the pharynx and a little oozing from the conjunctivæ. Has had cramps in hands, arms, legs, etc.; shooting pains in legs at night; no girdle sensation. Profuse hemorrhage from "blood counter's stab." Urine, 1012; albumen, 1-30 per cent; no glucose; no diazo; no indican; blood cells plentiful; blood casts; granular and epithelial casts. Blood, hemoglobin, 35 per cent; erythrocytes, 1,600,000; leucocytes, 15,400. Eyes, slightly myotic; react to light and accomodation; fields normal. Right eye shows large retinal hemorrhage; left eye, two smaller hemorrhages. October 20th blood shows hemoglobin, 32 per cent; erythrocytes, 960,000; leucocytes............

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SAN FRANCISCO, JANUARY 1, 1900.

NEW SAN FRANCISCO.

With the inauguration of the new charter San Francisco has at last awakened from her lethargy, and has assumed an energy and spirit becoming her position in the business affairs of the world. The very recent elections assure the citizens that Golden Gate Park will be extended to the heart of the city, which will not only beautify it to a remarkable degree, afford a recreation and play ground unparalleled in the world, but open up enticing and beautiful driveways to the ocean where our people can go and drink in the invigorating breezes of the Pacific. With such delightful approaches, as are promised by this needed improvement, many an invalid will be attracted to the ocean beach, who otherwise would never trust himself to seek this life-giving and stimulating blessing, thus rendered so easily and temptingly at hand. This awakening of our citizens to the extreme generosity and kindness of nature is pleasant indeed, and will bring untold benefits to weak and healthy alike.

A matter of less beauty, but of much greater significance to our sanitary condition, proclaimed, as necessary, almost unanimously by our voters, is the reconstruction of several of our school houses, the formation of a new sewer system, and at last the building of a new County Hospital. If there is any one thing needed by this community and worthy the issuance of bonds, it is the construction of a new building in place of the dirty, filthy, inadequate disgrace now used as a County Hospital. The medical profession have protested vigorously and frequently against the most unsanitary condition, the insufficiency and meagerness both of room and service of this institution; and profession and public will rejoice that one of the most disreputable eyesores of our political system will be removed and give way to the spirit of advance that has been brought about by the energy of our present Mayor.

It is but meet here to remind the profession and public that a large percentage of the so-called charity patients, seeking the benefits of the County Hospital, because they are unable to pay for the care and attention needed, are not charity patients in the sense that they receive something purely and simply for nothing, but that many of them now, and in days gone by had means, paid taxes, and paid well for the scant provision afforded by this institution. Having paid in advance they are deserving of better treatment than is given them on many occasions. If, these people are unable to pay for services needed in sickness, is it not more honorable for them to seek the aid of the county than wittingly defraud some physician and druggist? Is it not more worthy, even if they have never paid a farthing of taxes or contributed in the smallest way to the maintenance of such an institution, to seek the services here offered, in return offering themselves as a means of instruction to the student and physician in the advancement of medical knowledge? We therefore urge that all, physician, interne, nurse and employe, should be more considerate in the care of these people and in many cases of their feelings, since, as taxpayers and subjects for the advancement of knowledge, they certainly deserve more humane consideration than is often shown them. The plans adopted for the new building are stately and handsome and will furnish a comfortable and respectable home for our indigent sick. We sincerely trust that the location to be selected will not be a day's journey from the heart of town.

The rebuilding of many of our very unsanitary schoolhouses is another move toward bringing San Francisco to the front rank of cities. The condition of some of these buildings is lamentable; many should be destroyed entirely as they are undoubtedly nothing but breeders of disease and contagion. The construction of a new sewer system is no doubt hailed by every one with the utmost satisfaction. The patchwork now existing is simply disgraceful. Instead of the contents being carried out to sea by the currents and tide they are emptied right under our nose and the stench and odor is too horrible to be commented upon. Political jobbery is alone to blame for this state of affairs. The amount of money expended upon this one part of our public improvements has been enormous; the results have ever been most outrageously bad. With so narrow a channel and so swift a current it certainly is an easy matter to have the effluvia of the city carried beyond our reach. What has occurred is monstrously the contrary. Every ebb and flow of the tide brings the sewerage of the city back into the sewers and floods the streets with most unhealthy and undesirable fluids for the delectation of the residents of the lower districts and sends a most atrocious odor rollicking to the hilltops to distill itself to the nostrils of those living in more favored locations. It is high time that the public have rebelled against the outrageous policy of the bosses and taken the welfare of the city in their own hands. That these improvements will add most extensively to the future good of the metropolis of the West is beyond all cavil. Much needed sanitary conditions will thereby be made, the hygienic conditions vastly improved, and the beauty of the city increased by a measure adding health, happiness and pleasure to both citizen and stranger.

CALIFORNIA NORTHERN DISTRICT MEDICAL SOCIETY.

The annual meeting of the California Northern District Medical Society held at Marysville, November 14, was certainly the poorest in the history of the society for many years. The attendance, which only mustered thirteen members, has not been so small on any occasion since the earliest years of the society. This is the more remarkable as the banner meeting had been held in Marysville when on a former occasion forty members responded at roll call. Nor was this all for while usually at the meetings there is an abundance of papers, there was here not even sufficient to justify a programme, the actual number being three.

The principal cause for the paucity in attendance is, we believe, to be found in the fact that the programme that has hitherto been sent to the members a few days in advance of the meeting was not forwarded on this occasion. The rough programme did not reach the Secretary until the Saturday immediately preceding the meeting and it was impossible to have it printed and mailed in time to be of any service. Medical men with the innumerable demands upon time and attention are naturally forgetful of dates and we know from inquiry that of those who remembered the date of the annual meeting there were many, amongst the absentees, to whom the nonarrival of the accustomed programme signified a postponement. The President cannot be blamed for delay in forwarding the rough programme to the Secretary as he was, up to the very last moment, endeavoring to procure even the titles of papers from those that had pledged themselves in this connection. It is certainly discouraging to any presiding officer when his best efforts only resulted in the production of the papers and he may even be pardoned that his annual address was amongst those missing.

If the profession of the district desires to maintain a society that has shown so healthy a growth in the past and that has been of inestimable value both professionally and scientifically to its members, it must recognize that this is only possible as the result of some self sacrifice. If every member would twice a year be willing to make the same effort that a few of the faithful have undoubtedly put forth, there would never be any complaint in the matter of attendance. As for the scientific material there has not until the present been any dearth of papers, nor need there be, for papers can be prepared in advance and the mails are not interfered with by urgent cases. In all these things there must be an awakening and a greater responsibility rests upon the incoming officers than has weighted these officials for many years.

The social aspect of the meeting did not share in the general blight. The hospitality of Marysville remained unchanged. The Medical Society of Yuba and Sutter counties provided handsome entertainment for all and equally from the testimony of those who attended as well as of those that kept silent vigil and slept not during the progress of the festivities it must be agreed that the annual banquet was the redeeming feature of the meeting.

THAT ANTIVIVISECTION BILL AGAIN

More than once we have deemed it prudent to warn the profession against this measure, which, while seemingly aimed only at the prevention of cruelty to animals in the District of Columbia, carries with it a menace to all animal experimentation throughout our land. Dr. W. W. Keen, president of the American Medical Association, has recently issued an urgent appeal to the profession to unite against the adoption of this document. It is a great pity that Senator Gallinger, Geo. T. Angell and others of the same meddlesome stripe have less regard for suffering humanity than they have for a mangy cur. There would be some excuse for tolerating this kind of nonsense if these men had any grave reason for complaint and were not saturating the country with such outrageous and base statements as are here quoted from the *New England Antivivisection Society Monthly:*

"Vivisection is the mutilating, cutting and burning of living animals; they are dissected, roasted, boiled and skinned, when alive and in full possession of all their faculties, etc."

This is plainly, absolutely and absurdly false.

"'The New England Antivivisection Society' opposes vivisection because the number of animals vivisected, with unknown and inconceivable agony to each one, is probably several thousand each day."

It is a great pity that some of the fanatics of the New England Society could not be included among this number. If the agony is "unknown and inconceivable" why all this hullabaloo? What proof have they of its existence?

"Because anesthetics are very seldom efficiently used."

In perfect keeping with all they write.

"Because the results of vivisection are as near to absolute worthlessness as it is easy to get—in fact, cause great and absolute harm."

The results, according to the prospectus of this society could not be otherwise. Roasted and boiled dog are better subject for antivivisectionists than experimenters.

"Because, as recent revelations in the *Transcript* and other papers abundantly show, vivisectors of prominence and supposed character are, almost without exception, untruthful, and cannot be relied on to speak the truth about their acts."

Surely they are no better liars than those who concocted these charges.

"Because the animals used for vivisection are largely pet dogs and cats which are *stolen* for the purpose. The evening *Record* has exposed one of the greatest medical colleges in Massachusetts in its attempt to seduce a supposed characterless wretch to steal cats for vivisectionists (which he freely admitted he intended to do), without any expressed disapproval on the part of said colleges."

God bless the college and the thief! What a favor he has conferred upon certain districts of Massachusetts. The occupation of this "characterless wretch" should be raised to the dignity of a State office.

"Because the practice of vivisection has bred and is breeding, in vivisectors, a degree of cowardice, meanness, hypocrisy and insane lust for cruelty, that, it is to be feared, will produce, in another generation, a race of educated monsters of depravity such as this world has not known and the imagination of mankind cannot conceive. Already human victims are openly demanded by vivisectors in Ohio, and every true vivisector longs, in his heart, for *human victims* to vivisect.

"Just as soon as encouragement and the present tacit acquiescence in vivisection has changed the vivisector from the cowardly hypocrite he at present is, into the arrogant persecutor he longs to be, the demand for men and women will be universal—not confined to a single State!

"Please join the 'New England Antivivisection Society' *at once*," so that if the happy day arrives, when human victims will alone satisfy the race of "educated monsters," whose villany the "imagination of mankind cannot conceive," they will have at hand a list of subjects, inferior though they be, to amply supply all their immediate wants. We hope the Ohio vivisectionists will soon make a break for Massachusetts and New Hampshire and clean up this crowd.

Is it not astonishing and disgusting that educated men and women will seriously scatter such material broadcast and waste lives that might be rendered of some value in the consideration of other causes than the pet dogs and cats of poor old New England? If they would only turn their attention to the prevention of the destruction of unborn humanity and indirectly our race, to the preservation of those little ones, whom He, whom they profess so fervently to follow, loved so earnestly and so humanely endeavor to protect, how immense would be the field and especially would that corner of the world, whence so much wisdom is supposed to come, profit thereby. Yet, alas, they give no heed to their own kind but, as in the case of the last war, tearfully and in dire lamentation weep over a sore back mule, leaving those, who were fighting to protect the integrity and honor of their country, to die without the slightest expression of compassion or regret. Such perverted efforts of commiseration and such shows of sympathy are evidences of a degradation more to be pitied than the dumbness of this very brute creation, for which they plead so ardently.

It is well that Senator Gallinger has turned his time and attention to politics and the prevention of cruelty to animals and left the practice of homeopathy at least for the present; since this fad, practiced according to the law and letter of the doctrine, is surely as much and even more a cruelty to humanity than to etherize a dog for experimental purposes. If he could only realize the suffering, prolonged by this form of treatment, which is rarely honestly followed to-day, he would confer a more lasting favor upon his fellowman than wasting his time on bobtailed poodles. As a medical man he should know that doctors are most tender of heart and compassionate and extend the greatest commiseration even to those showing such perversion of intellect and judgment. This dog-loving mania, this fondling and adoration of brutes instead of being a manifestation of one of the first and truest principles of life, engrafted even in the hearts of the young and the most uncultured, is a crime that will wreak vengeance upon those defying the desire and will of the Almighty. God desires all to be kind and gentle to the beasts of the field, but he does not wish us to place them on the plane that he has ordered for man, "the image and likeness of his Maker." Let all, therefore, unite in a monstrous protest against this perverted class of humanity, as well as against this effort to destroy an efficient means of aiding and improving ourselves and our fellowmen.

CORRESPONDENCE.

Some Observations in the Ear Clinics of London, Berlin and Paris.

I noticed little new in the treatment of diseases of the ear in my visits to the various clinics with the exception of the indications for, and the treatment of mastoid disease. In acute cases the treatment is very much the same by all experienced operators. The difference mainly consists in the thoroughness with which the operator removes the diseased tissue, and continues the investigation to the sinus or brain in cases indicating disease of these parts.

The rules for performing the radical operation in chronic suppuration of the middle ear are not so clearly defined nor have the various operators come to any common understanding as to the indications for it. Luc, of Paris, and many other otologists believe that the radical operation should be done in cases of middle ear suppuration which do not recover after a month's faithful treatment. This rule, however, is far from being universally accepted, and the question still remains open for discussion.

Observing physicians can no longer doubt that chronic suppuration in the middle ear is a constant menace to the life of the patient. The great importance of this subject has not been long understood by specialists, and many practitioners still consider ear discharges of little significance. The family physician occasionally discovers the connection between a chronic ear discharge and brain disease when it is, perhaps, too late to save the patient by an operation. Every physician of experience will remember such cases. The most progressive men of to-day advocate operating upon all chronic suppurations of the middle ear before such unfortunate extension can take place.

Jansen, of Berlin, does not lay down any specific time limit when the radical operation should be undertaken, but bases his decision upon the condition found in the ear and neighboring tissues. He has undoubtedly had more experience during the past ten years with this class of cases than any other operator. Dr. Jansen, being a modest man, does not state how many mastoid operations he has done, but those in a position to know informed me that he had performed more than three thousand during the past ten years. I have seen him do three in a single day, and my observation leads me to conclude that he does this operation with as great a degree of perfection as it is possible to attain.

Jansen has, I believe, abandoned the Stacke operation altogether. He begins by making the incision close to the ear, and then clearing the bone of periosteum from the meatus well back on the mastoid. The chiseling is begun just below the linea temporalis using broad chisels at first and changing to narrower ones as he goes deeper into the bone. The bone and cells are carefully removed till the antrum is reached. All diseased tissue is removed, using care not to injure the sinus or other important parts. The posterior wall of the bony meatus is then taken away uniting the antrum, the attic and the middle ear cavities. The remaining parts of the drum membrane and ossicles and any granulation tissue in these cavities is also carefully removed. The lining membrane of any cholesteatoma producing cavity is thoroughly removed. This is best accomplished with a small burr driven by an electric motor. This instrument is also used to smooth off any uneven places in the bone cavity. After the bleeding is checked the Thiersch skin grafts taken from the previously prepared arm or leg are placed in the cavity and covered with a small piece of guttapercha tissue over which is a piece of lint lightly spread with simple ointment held in place with small pieces of plain gauze.

The skin and cartilage of the meatus is now divided by two incisions so as to allow the flap to be moved back into the cavity. The incisions are extended internally to enlarge the meatus and facilitate future care of the wound cavity. The flap of the meatus is now packed against the posterior wall of the bony cavity on that portion unoccupied by the Thiersch grafts, and the external wound closed by sutures.

Perfect asepsis is maintained throughout all steps of the operation. Iodoform gauze is used to pack the wound cavity with the exception of the plain gauze that holds the skin grafts in place. In certain cases the extent and condition of the wound will not permit of immediate closure of the external opening. In such cases a secondary operation is done when the wound cavity has become covered with healthy epithelium. The use of Thiersch skin grafts is a decided advance over the method in general use of allowing the wound to heal by granulation. I have seen a number of cases which healed within two weeks. When the wound is left to granulate months are often required before the process of healing is complete.

The only operation I saw performed in London for the cure of chronic suppuration was that of Stacke. Luc, of Paris, also prefers that method. My own conviction, however, is in favor of the operation with skin grafts as performed by Jansen. The diseased tissue is much more thoroughly destroyed and the likelihood of future trouble is, I believe, much less than after the Stacke operation.

Since my visit to the European clinics seven years ago the radical operation has been established on a solid foundation, and the frequency with which it is at present performed attests to the fact that it is comparatively free from danger and that the patient's safety and comfort is greatly promoted thereby. There are many men who protest that mastoid operations are done too often by certain surgeons. It is no doubt true that some cases are operated upon that would either recover or that would continue indefinitely without serious results. But I think the time will soon come when it will be considered quite as unjustifiable to allow an ear to suppurate indefinitely as it is, at present, to permit a case of chronic appendicitis with probable suppuration, to go on without surgical treatment.

WM. ELLERY BRIGGS.

Paris, September 20, 1899.

Johns Hopkins Hospital and Medical School.

The new ideas pervading medical education are perhaps better exemplified at Johns Hopkins than at any other of the Eastern medical schools. The general plan is to substitute laboratory work for lectures wherever possible. In carrying out this idea, in addition to the laboratories used in the teaching of bacteriology, physiology, anatomy, pharmacology, etc., laboratories are also employed in connection with the courses in obstetrics, gynecology and clinical medicine. In the obstetric laboratory the pelvic structures and deformities are closely studied from specimens. The pathology and physiology of pregnancy are shown by microscopic examinations of tissues, a series of which are mounted by the students. Many wax and plaster of Paris models are also demonstrated. This is of course in addition to the work done in the hospital wards and in the out patient department. In the gynecological laboratory tumors and uterine scrapings are examined and in the clinical laboratory blood, sputum, gastric contents, urine, feces, etc. Bedside instruction is the great feature of the fourth year. But leading up to this work is the careful training of the first three years, which is designed to make the student investigate for himself. The beginning of this sort of training is the course on anatomy under Professor Mall, who has very pronounced ideas on methods of instruction. Lesson, lectures and book learning he abhors. Original investigation, observation and practical work he insists on. This idea is carried out more strongly in anatomy, perhaps, than in any other of the departments, and as the students get it while they are fresh, it has a strong influence in molding their methods of work. The result is that a great deal of original work is done even by undergraduates. Where a student manifests any disposition to pursue original investigation he is helped and encouraged in every way.

The founder of the school was a rich merchant of Baltimore named Johns Hopkins, who had no family and no near relatives. Besides providing for the university that bears his name, he set aside two million dollars of his fortune for the establishment of a hospital, expressing the desire that the income of this sum should alone be used, and that eventually the hospital should form a part of a medical school. In the evolution of the plan, the hospital was built first, next a post-graduate course was inaugurated and finally the medical school itself was established. The hospital was opened in 1889 and the graduate department established soon after. The trustees had determined not to open the medical school until five hundred thousand dollars had accumulated. With the heavy expense of the hospital, it would have required a long time to reach this sum. In order to hasten the project the women of Baltimore, headed by Miss Mary Garrett, made up the required amount on condition that women should be admitted on equal terms with men. The gift and conditions were accepted, and the medical school opened in 1893. The first thing that strikes one about the institution is its newness. It is but six years old and yet is among the most noted of medical schools. Again one notices the small number of students. The average in each class is about fifty and as a matter of fact the faculty at present desire to limit the classes to this number, for larger classes cannot be well handled in the extensive laboratory courses. The name of the school and the small number of students are due in great part to the high standard of requirements on entrance. As the catalogue states "The course of instruction is planned for the professional education of those who have received a liberal education." There is much bitter feeling toward the school among the profession of Baltimore and Maryland. This is partly due to jealousy of its exceptional advantages and success; partly that the profession of Baltimore was almost completely ignored in the selection of the faculty, and partly to the fact that Johns Hopkins himself was a very unpopular citizen. The medical school is as it were built upon the hospital. The laboratories and lecture rooms are mostly on the hospital grounds and closely connected with its buildings. The hospital has about 200 beds, the majority of which are free. Both hospital and school are controlled by the faculty. The dispensaries, which are always crowded, provide a means of filling the hospital with selected cases. The knowledge that the beds are free attracts large numbers to the clinics. Patients are admitted to the wards at the discretion of the heads of clinics. This gives the instructors the opportunity of choosing cases for illustration and of providing themselves with abundant material when interested in the study of particular diseases. The free beds, therefore, are as useful as they are charitable.

The Clinics. These are open every day except Sunday and are in progress both forenoon and afternoon. The average daily attendance is about 200. The total attendance for 1898 was 64,273 divided among 11 clinics. The records are kept entirely by the card system and two persons are provided to attend to the reception of patients. The patients enter a large room and are received by an usher who ascertains to which department they belong. They are then provided with a large card about 8 inches square upon which the histories are written. These cards are collected by the usher as the patients go out and are kept on file. When the patient comes again the usher gives him his history card, which he takes with him to the clinic room. By this system no books are kept and no clinic retains its own records. The clinic rooms are small apartments leading off from three sides of the reception room.

The Venereal Clinic. In 1898 the attendance was 5,247. The average daily attendance is about 16. Gonorrhea is treated with irrigation of hgclz, 1 to 80,000. The experience of the clinic is that anything stronger is not followed by as good results in routine practice. Permanganate of potash is sometimes used but not often. Whenever the posterior urethra is affected, the irrigating fluid is forced into the bladder. In accomplishing this the anterior urethra is first washed out with the irrigating bag at a moderate height. Then the bag is raised ten or twelve feet so as to force the fluid through the cut off muscle. When the bladder is full the patient passes the water. Each patient is taught how to irrigate himself and is advised to carry out the process three times a day. He is provided with a fountain syringe, a glass nozzle and about a dozen bichloride tablets of such strength that one, added to a quart of water, makes a solution of 1 to 80,000. The small number of tablets furnished encourages frequent visits to the clinic. Syphilis is treated mainly with the mercurials, the course extending over two years. The protoiodid is pushed until toxic effects follow. If the bowels are affected the "Ricord" pill is substituted. In conjunction with the pill inunctions are carried out for a month at a time, skipping a month between each course. The department is furnished with two treatment rooms, a laboratory for urinary analysis, the culture of cocci and cystoscopic examinations. The cystoscope is not used very frequently, generally in obscure or chronic cases.

Obstetrics.—As mentioned above, one of the most interesting features of this department is the laboratory with its specimens and manikins. For the hospital work two wards are used, one for colored and one for white patients. The beds are free and patients are admitted six weeks before the time of confinement. If any cases of particular interest present themselves, as, for instance, cases of contracted pelvis, they are admitted at any time and are kept for the instruction of students. The obstetric wards accommodate fifty-two patients. At present about 250 confinements are cared for each year. After parturition cases are allowed to remain fourteen to sixteen days. The infants are kept in a separate room and are taken to the mothers every three hours during the day and every four hours at night. When fed they are given food modified according to Rotch's formula. The physician in charge simply writes a prescription for the required amounts of proteids, fats and carbohydrates. The out patient department cares for about 300 cases each year. One of the internes at the hospital is detailed for out patient cases and is responsible for all that occur during his term. Each senior student in turn is assigned to out patient duty and must attend until he has seen six cases. He is given a room in the hospital or in the neighborhood and is expected to occupy it until he is ready for a case at any time. A student usually sees his cases within a week. A trained nurse is kept at this work constantly. As soon as a messenger arrives at the hospital, giving notice of a case, he is given a box containing towels, sheets, antiseptics, rubber sheets, etc., and all things likely to be needed. The patients are not expected to supply anything but hot water and clean towels. The box also contains a round covered pan in which the placenta is placed and carried back to the hospital. The nurse, the interne and the student then go to the case. If it is serious the patient is removed to the hospital in an ambulance. The students must also make five visits during the puerperium and must record the condition of the patient on charts. Besides the out patients each student must also see two confinements in the hospital wards.

Gynecology.—This department is noted through the fine work done by Professor H. A. Kelly. A large amount of material is available here and the chances for seeing operations are good. Dr. Kelly operates three times a week and has five or six cases each time. He delivers a lecture once a week in an informal way, usually illustrated with the stereopticon. He has a large collection of lantern slides, numbering four or five hundred, made and presented to the department by Mr. A. S. Murray, an amateur photographer. Practitioners coming here for observation or instruction are usually somewhat disappointed unless they arrive during the regular post-graduate term in summer. The clinic for diseases of women is closed to both students and visiting physicians on the ground that the presence of strangers injures the attendance. The clinic really acts as a feeder to the operative department. The students have no opportunity for treating or managing clinical cases. Instructions in pelvic examinations are given by what is called a touch course under an anesthetic and students are allowed the opportunity of mapping out the pelvic organs. Lectures on gynecology are delivered by an assistant. The course in gynecological pathology, where tumors and uterine scrapings are dealt with, is valuable and interesting. As for the operations, Dr. Kelly does the main portion himself, but leaves the finishing within the pelvis and sewing up the wounds to his first assistant. The patients are prepared for the operating room and visitors find they must wait a considerable time between cases. The principal points in Dr. Kelly's technic are: 1. Rubber gloves worn by himself and all assistants. 2. Use of suture carriers almost exclusively. 3. Fine silk in tying the cardinal arteries. Catgut everywhere else. 4. Sterilized sea sponges. 5. In perineal cases a few silk worm gut sutures are used. 6. Abdomen flushed with salt solution in all but very clean cases. 7. Abdominal incision closed with three or four rows of catgut. The skin united by the intracuticular suture. 8. Silver foil as dressing for wound. 9. Salt solution injected into the rectum in all abdominal cases. 10. Saline hypodermoclysis where indicated. 11. Nurses excluded from operating field. Only two are present and they act as runabouts. 12. All patients are prepared in the operating room. Some general bathing is done in the wards, but the shaving of the vulva and the sterilizing of the skin is carried out by an assistant after the patient is under an anesthetic. Dr. Kelly is very much interested in his work, talks constantly during his operations. He is a close observer and is able to point out peculiarities in structure and pathology in a very entertaining way. Most of the visitors desire to see him catheterize the ureter. This he does with the patient anesthetized and in the knee chest position. He takes care to inflate both the rectum and the vagina with air before catheterizing in order to allow the posterior wall of the bladder to assume a horizontal position instead of hugging sacral curve. In his operations he always makes it a point to examine the pelvic organs, noting particularly the condition of the appendix and gall bladder. He frequently finds the appendix diseased and removes it.

Surgery.—The surgical side of Johns Hopkins is quite different from the gynecological in equipment and in technic. Professor Halstead is in charge, a surgeon noted for originality, scientific investigation and careful work. His operating room presents a marked contrast to that of Dr. Kelly. The latter is fitted with all conveniences, while Dr. Halstead's contains only the seat of the operation sterile. The floor is of wood, the operating table is likewise of wood and resembles a large trough. The patient is placed on a flat board or stretcher and lifted on the table, the ends of the stretcher resting on the edges of the cloth. From the center of the trough an opening leads to an ordinary zinc ash barrel into which the water from irrigating fluid runs. There is no formality about visitors. They are permitted to come into the room without the usual gowns. About the seat of the operation, however, the greatest care is taken. Dr. Halstead and all his assistants wear duck suits and canvas shoes. Dr. Halstead is very careful and deliberate about his work, with most excellent results. He talks very little while operating, but does not hesitate to stop at any time and explain fully any interesting points. The principal items of general technic noticed are: 1. The use of rubber gloves. He is said to have been the first to employ them systematically. All assistants about the seat of the operation wear them. 2. Hagedorn needles. 3. Gauze sponges used dry. 4. One nurse to attend sponges. 5. Silver wire buried for peritoneum muscle and fascia. 6. Fine silk for tying small bleeding points. 7. Fine silver wire usually for intracuticular suture (running). Occasionally he uses catgut for this purpose. 8. Silver foil over the incision. The patient is carefully prepared in the ward, and, just before operation, the part is cleansed with green soap, alcohol, ether, permanganate of potash and oxalic acid.

The Training School.—The course for nurses covers three years. Applicants must be between 23 and 35 years of age. The educational qualifications are rather strict and the announcements state that women of superior education and cultivation are preferred. The nurses receive no pay, but are provided with board, lodging, laundry work, uniforms, text books, stationery, etc. The hours on duty are no more than eight, but in addition nurses are expected to devote two hours to lectures, classes or study. Each ward is in charge of a head nurse, who is a graduate and receives a salary of $30 per month. She makes reports in writing to the superintendent of nurses at stated periods, regarding the character of the work, executive ability, judgment in emergencies and observance of regulations of each nurse in her ward. This goes on record in estimating a standing of the nurse. The instruction received amounts to a liberal education, as will be seen from the following summary. The junior class receives lectures on hygiene, medicine, foods and physiology; the middle class on bacteriology and pathology, surgery, infectious diseases, malarial fever, the urine, gynecology and massage; the senior class on obstetrics, diseases of children, constitutional diseases, general medicine, insanity, electro-therapeutics, diseases of the skin, diseases of the eye and ear, diseases of the throat and nose. The superintendent of nurses gives a course on the art of nursing in hospitals and private families. Besides this each nurse receives special instruction in bandaging and cooking. The latter course occupies five weeks and consists of thirty lessons in the art of preparing food. While engaged in this the nurses are excused from all other work. No male nurses are received or employed. The work which female nurses cannot be expected to do in the care of male patients is done by orderlies who are under the direction of the head nurse of the ward. The school consists of one superintendent, two assistant superintendents, eighteen head nurses and seventy-two undergraduate nurses. The nurses' home is a large four-story brick building connected with the hospital building by a covered corridor. It is finely furnished and contains besides the sleeping quarters a library, music room and parlor.

Geo. B. Somers.

Baltimore, Nov. 14, 1899.

SOCIETY PROCEEDINGS.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Dr. E. E. Kelly in the Chair.

Dr. Wm. Fitch Cheney read a paper on "The Diagnosis of Aneurism of the Aortic Arch." [Published at page 1.]

Dr. H. C. Moffitt: "I shall say a few words on some aneurisms that we have had at the hospital recently in the University of California wards. On twelve we have tried the various standard methods. We have not tried the Tufnell treatment because of its severity. We relied almost entirely upon the iodids, rest, restricted diet and ice externally. We begin with a small dose of the iodids and run it up gradually to one dram a day. There is undoubtedly improvement in the great majority of the cases, that is, of the symptoms. There is a man in the hospital now, who had aneurisms in two places and so far as examination goes they are entirely cured. They were of the ascending part of the arch and innominate, and of the transverse part of the arch. Other cases have gone on progressively but more slowly, under the iodids, to autopsy. With two men I tried injections of gelatin with practically no result. Other treatments were not tried, that is, veratrum viride or any other arterial depressant, except the iodids. Nitroglycerin we used symptomatically. Morphia, especially if there is low diet, has been given in moderate doses. At autopsy not long ago we had an aneurism of the arch in which the man had no symptoms whatever. He died of pulmonary tuberculosis."

Dr. Z. T. Malaby exhibited a specimen and said: "I have here a very pretty specimen of aneurism of the aortic arch. The patient was a German aged thirty, big and strong, and who had never done any hard work. He denied syphilis. He died 36 hours after his initial illness from suffocation due to pressure on the trachea! He had no symptoms at all of aneurism."

Dr. J. Rosenstirn read a paper on "The Surgical Treatment of Aneurism of the Aortic Arch." [Published at page 4.]

Dr. J. H. Barbat: "There is one method of treatment mentioned by Dr. Moffitt, which I wish to speak of, that is, rest in bed. I speak of this because I had a case of abdominal aneurism that I was very anxious to be operated upon. The man went to bed and took absolutely no medicine. All he had was absolute rest. He is now well. I had the pleasure of assisting with the case of Dr. Kerr at the City and County Hospital. He used about 25 or 30 gravity cells giving about 30 milliamperes."

Dr. Emmett Rixford: "I am fortunate in having seen some cases treated by this method of introducing wire. One was a large aneurism of the aorta, including the innominate, which had grown so large as to soften the clavicle and project in a great mass at the base of the neck. It was as large as two fists, and seemed about to burst. It occurred in the practice of Dr. Lane. He used this method of rest in bed with the method of Valsalva and bled the man until he became slightly faint, obtaining 41 ounces of blood. This was done four times, resulting in a reduction of the blood pressure and hardening of the aneurism. The patient was very much improved and the rest was continued for two or three months. At the end of that time the wall began to thin again and the pulsation became more severe. Then twenty feet of silver wire was introduced into the aneurismal sac.

No trouble ensued for several weeks. Apparently coagulation had occurred around the point of insertion. At the end of two or three weeks more the aneurism burst and the man died. The wall showed a laminated clot over a considerable area in the neighborhood of the puncture. At a recent autopsy a loop of wire, which had been introduced into the aneurism, was found within a quarter of an inch of the aortic valve. A case is on record where the wire penetrated into the ventricle. This danger seems to furnish a very serious objection to the use of wire. You have very little control over it and do not know just where the end will go. It may pass down into the heart and cause fatal damage. It is urged against electricity that you form a clot, which is unattached and as such may very easily, through some exertion of the patient, break off and form an embolism. I think that it is very unfortunate that the method of MacEwen has not received more attention. The blood clot is simply fibrin; it is not in itself a tissue capable of permanent life. This method is directed particularly towards this side of the question. The organization of the blood clot takes place from the permanent cells of the vessel wall. His idea is that by scratching off the endothelial lining in several places on the wall of the aneurism, connective tissue will grow up from these points and the firm organized tissue thus formed will persist. This operation of necessity must be repeated several times, the idea being that only a limited amount of connective tissue would form and grow over the clot. The endothelium grows very rapidly in the interior of the blood vessel. It has been my fortune to have seen two thoracic aneurisms treated by him in this way. In the one there was a mass of hard, firm, fibrous tissue two inches or more in thickness and in the other the thickening was something more than one inch. There was a fairly good blood channel passing through. Concerning the indications for this operation MacEwen lays great stress on the careful choosing of the cases. He makes the point that an aneurism, which has gone so far as to erode the bone, should not be subjected to his operation for the reason that on the side that the bone is, there is great danger in scratching with the needle, of loosening some fibrin and the attachment of the aneurism to the bone and causing fatal hemorrhage. The operation consists in introducing a sterilized needle through the wall and scratching off the endothelium on the opposite side. It is not easy to tell when you have reached the opposite wall. The needle is moved about until a resistance is felt."

Dr. C. G. Kenyon: "I have on two occasions passed the silver wire. One case did pretty well after the operation, although the aneurism was quite well advanced at the time. The patient lived several months and I believed that he was cured. The point that Dr. Rixford made with regard to the tendency of the silver wire to travel, is very well taken. One case in mind showed on post-mortem that some of the wire had traveled along the transverse part of the arch of the aorta and caused considerable damage, hastening death. As far as the operation is concerned it is a very simple process, but the results have not been satisfactory."

Dr. Rixford: "The X-ray will show very small tumors in the region of the heart. I have seen aneurismal tumors of the aorta not larger than a hen's egg, and possibly smaller."

Dr. Barbat: "If you can see by means of the X-ray the definite, clear outline of the heart and its pulsations, there is no doubt that you can see tumors. I make examinations every day and invariably get the outline of the heart and can make a diagnosis of enlargement of the heart without any other examination."

Dr. Moffitt: "The trouble with the X-ray is that you see every change in the aorta; the transverse arch may present itself and pulsate to the left of the spine and on autopsy show nothing but a large aorta. Just where it turns to the left of the spine we may see an enlarged aorta due to arterio-sclerosis simply."

Dr. C. G. Levison exhibited a specimen from a case of cancer of the rectum and prostate and said: "The patient was first operated upon for a cancer of the rectum and prostate. About five inches of the rectum was removed and also the prostate together with the base of the bladder. Prior to this a colostomy was performed. The case recovered and subsequently the artificial anus was made by resection of the intestine. The Murphy button was used. I brought this specimen down to demonstrate to you how an intestine appears sixteen months after the insertion of the Murphy button, and that there is absolutely no contraction of the lumen of the intestine. In the region of the prostate there was slight recurrence."

Book Reviews.

A LABORATORY MANUAL OF PHYSIOLOGICAL CHEMISTRY. By Elbert W. Rockwood, B. S., M. D., Professor of Chemistry and Toxicology in the University of Iowa. Illustrated with One Colored Plate and Three Plates of Microscopic Preparations, 5⅛x7¾ inches. Pages viii—204. Extra Cloth, $1.00, net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia.

This work, which deals with physiological chemistry as taught by Professor Rockwood in the University of Iowa, is one of the most satisfactory we have ever seen. It is complete enough for the student, and meets the requirements of the practitioner, who wishes to make the tests requisite for a diagnosis in so many cases to-day. The work is neatly edited and well printed, and is worthy a place on every work table.

The portion devoted to urinalysis is clear and complete.

OVER 1,000 PRESCRIPTIONS or Favorite Formulæ of Various Teachers, Authors and Practicing Physicians. The whole being carefully indexed, and including most of the newer remedies. Cloth, 300 pages, postpaid, $1.00. The Illustrated Medical Journal Co., Publishers, Detroit, Mich.

This is the second edition of this manual, and is just from the press, besides having about 100 new pages. The index is convenient and complete, adding largely to the value of this class of work. Both old and new writers and old and new remedies are given space and treatment brought down to date. Blank pages are found in sufficient number to enable one to preserve any prescriptions of special worth or novelty.

A TEXT-BOOK OF THE DISEASES OF THE NOSE AND THROAT. By D. Braden Kyle, M. D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College; Consulting Laryngologist, Rhinologist and Otologist to St. Agnes' Hospital, Philadelphia. Illustrated. Philadelphia: W. B. Saunders. Price, cloth, $4.

The author states in the preface that he has aimed to present a work on Diseases of the Nose and Throat in as concise a manner as is compatible with clearness. In this effort he has succeeded well, and he has produced a book that will be found well suited to the wants of the student, the general practitioner, as well as the specialist. The new arrangement of diseases according to the pathological changes caused by them has necessitated some repetition, but at the same time it makes each chapter more complete. The author has made little mention of instruments, operations and methods of treatment not used by himself. This has its advantages, but on that account it makes a less complete text-book. The chapters on anatomy and physiology are illustrated by many good plates made from specimens prepared in the author's laboratory. Transillumination in the diagnosis of sinus trouble is well described and the book is well illustrated and generally up to date.

Notwithstanding the great loss which the J. B. Lippincott Company sustained in the destruction by fire of their entire plant, except perhaps the plates, the energy which they have shown is remarkable.

They at once secured the building at 624 Chestnut Street, Philadelphia, where they have furnished handsome offices, their entire clerical force being actively at work.

Arrangements are also being made for a new manufacturing building, to be occupied during the reconstruction, on a thoroughly modern scale, of the premises they formerly occupied.

New supplies of the latest types are being purchased, and the standard of taste and excellence for which the Lippincott books have been famous will be maintained and developed.

Early in the coming year they hope to have ready a full stock of their important books, and they are always open for the consideration of manuscript.

MEDICAL NEWS.

Licenses Granted.

Office of Board of Examiners of the Medical Society of the State of California, 1104 Van Ness Ave.

San Francisco, Nov. 7, 1899.

The following certificates to practice medicine in this State were granted on the above date:

5374. Abbott, Walter H., Bradford, N. H., Dartmouth Med. Coll. New Hampshire, Nov. 24, 1891.

5375. Anton, Francis L., Los Angeles, Coll. Med. Univ. Southern California, June 16, 1899.

5376. Birdsall, W. G., San Francisco, Jefferson Med. Coll., Pennsylvania, May 15, 1895.

5377. Boyd, Elmer T., Leadville, Colo., Missouri Med. Coll., Missouri, March 6, 1888.

5378. Clayton, William A., Downieville, Coll. Phys. and Surg., Keokuk, Iowa, June 20, 1876.

5379. Crosby, Daniel (lieu certificate), San Francisco, Cooper Med. College, California, Dec. 8, 1898.

5380. Dogge, Otto H., San Jose, Missouri Med. Coll., Missouri, March 6, 1883.

5381. Dunning, W. M., San Francisco, Med. Dept. Univ., City of New York, March 29, 1892.

5382. Fuson, A. U., Stockton, Coll. of Phys. and Surg., Chicago, Ill., April 19, 1898.

5383. Gesner, Van, Napa, Jefferson Med. Coll., Pennsylvania, April 2, 1883.

5384. Green, Charles W., San Francisco, Medico-Chirurgical College, Pennsylvania, April 10, 1890.

5385. Grotefend, Elizabeth E., San Francisco, Cooper Med. Coll., California, Aug. 22, 1899.

5386. Hillkowitz, Wm., Cincinnati, O., Med. Coll. of Ohio, March 7, 1888.

5387. Humphris, F. Howard, Los Angeles, Univ. of Brussells, Belgium, Sept., 1895; Royal Coll. Surg., England, 1895; Royal Coll. Phys., Edinburgh, Scotland, Oct., 1896.

5388. Janss, Herman, Los Angeles, Coll. Phys. and Surg., Chicago, Ill., April 19, 1899.

5389. Keith, John G., Leadville, Colo., Med. Dept. Univ., Louisville, Ky., March 3, 1891.

5390. Legge, Robert T., San Francisco, Med. Dept. Univ. of California, May 16, 1899.

5391. Littlefield, Horace R., Portland, Or., Rush Med. Coll., Illinois, Feb. 2, 1870.

5392. Martin F. S., Parker, Ariz., Barnes Med. Coll., Missouri, March 20, 1894.

5393. Nelson, Charles D., Pomona, Med. Dept. Harvard Univ., Massachusetts, June 24, 1891.

5394. Palmer, May McKinney, San Francisco, Cooper Med. Coll., California, Aug. 22, 1899.

5395. Sakata, Minora, San Francisco, Tokio Med. Coll., Japan, Sept. 30, 1895.

5396. Selover, F. E., Eugene, Or., Med. Dept. Univ. of Oregon, April 5, 1897.

5397. Smith, Bim, Los Angeles, Coll. Med. Univ. Southern California, June 16, 1899.

5398. Speicher, Asa F., Elk Lick, Pa., Coll. of Phys. and Surg., New York, May 13, 1881.

5399. Stearns, W. H., Los Angeles, Coll. Med. Univ. Southern California, June 16, 1899.

5400. Stinchfield, H. C., Los Angeles, Coll. Med. Univ. Southern California, June 16, 1899.

5402. Wentworth, Andrew R., Vallejo, Dartmouth Med. Coll., New Hampshire, Nov. 11, 1884.

5403. Whitmore, Edward A., Leadville, Colo., Gross Med. Coll., Colorado, April 9, 1896.

5404. Yocom, James R., Tacoma, Wash., Med. Dept. Harvard Univ., Massachusetts, June 27, 1888.

December 5, 1899.

5405. Bellows, George E., Riverside, Coll. of Phys. and Surg., New York, May 12, 1885.

5406. Bennie Andrew, Santa Ana, Coll. Med. Univ., Nebraska, March 19, 1885.

5407. Burns, Arthur, San Francisco, Bellevue Hospital Med. Coll., New York, March 1, 1871.

5408. Burroughs, Joseph B., Randsburg, Med. Coll. Syracuse Univ., New York, June 9, 1881.

5409. Clark, Daniel G., Stayton, Med. Dept. Willamette Univ., Oregon, April 1, 1899.

5410. Dumas, Michael O., Washington, D. C., Med. Dept. Howard Univ., D. C., April 19, 1895.

5411. Elkin, Samuel James, Emerson, Manitoba, Univ. of Manitoba, Canada, April 20, 1894.

5412. Foster, John Watt, Pasadena, Medico-Chirurg Coll., Pennsylvania, April 16, 1891.

5413. Gillihan, Allan Francis, San Francisco, Med. Dept. Univ. California, May 16, 1899.

5414. Holladay, Frederick Short, Los Gatos, Detroit Coll. of Med., Detroit, Mich., May 11, 1899.

5415. Hopkins, Silas Wilson, San Jose, Louisville Med. Coll., Kentucky, Feb. 27, 1879.

5416. Hutchinson, Randall, Los Angeles, Med. Dept. Univ. Pennsylvania, May 2, 1887.

5417. Koenig, T. T., Bakersfield, Kentucky School of Med., Kentucky, June, 1892.

5418. Mackenzie, Edward E., San Francisco, Univ. Maryland Med. School, March 14, 1884.

5419. Mayo, H. N., San Francisco, Baltimore Med. Coll., Maryland, April, 1895.

December 6, 1899.

5420. McArdle, Robert F., Los Angeles, Royal Coll. Surg., Ireland, July 14, 1884; Royal Coll. Phy., Edinburgh, Scotland, June 2, 1887.

5421. Miller, R. A., Sebastopol, Galveston Med. Coll., Texas, March 2, 1871.

5422. Parks, Gilbert F., Orland, Detroit Coll. Med., Michigan, March 23, 1886.

5423. Reyber, Ernst L., Los Angeles, Med. Dept. Grant Univ., Tennessee, March 17, 1896.

5424. Rickter, Louise M., Los Angeles, Med. Dept. N. W. Univ., Illinois, June 13, 1895.

5425. Sutcliffe, Henry Harcourt, Santa Rosa, Med. Dept. Univ. Oregon, April 5, 1897.

5426. Upton, William E., Napa, Fort Wayne Coll. Med., Indiana, March 7, 1893.

5427. Vanneman, Albert Walter, Los Angeles, Jefferson Med. Coll., Pennsylvania, May 14, 1897.

5428. Worthley, Asa H., Roseville, N. W. Med. Coll., St. Joseph, Mo., Feb. 20, 1893.

CHAS. C. WADSWORTH, M. D.
Secretary.

Two Cases of Tabetic Spontaneous Dislocation at the Hip-Joint.

Dr. Huchzermeyer reports, in the Centralblatt f. Nervenheilkunde und Psychiatrie, vol. xxvii, 1899, p. 263, two cases of tabes, in which dislocation of the hip-joint was an early symptom. Both of these patients showed typical symptoms of locomotor ataxia. The point of interest brought out in their clinical histories was that it was thought possible that the trauma was the cause of the development of the disease; the spinal chord becoming involved after a chronic ascending neuritis.

The Origin of the Oxalic Acid of the Urine.

As the result of clinical investigation Lommel concludes that the oxalic acid contained in human urine is derived, if at all, in only small amounts from the oxalic acid introduced with the food. In by far the largest part it is generated in the organism. The amount of oxalic acid in the urine and in the faeces after ingestion of considerable quantities of oxalic acid represents only a small portion of that introduced. The oxalic acid is probably decomposed largely in its passage through the organism. Decomposition of the oxalic acid in the intestines is, however, not to be excluded. The elimination of oxalic acid bears direct relation to albuminoid metabolism. A diet rich in nuclein induces, in addition to increased elimination of uric acid, also a considerable increase in the elimination of oxalic acid. A diet rich in gelatin likewise causes increased elimination of oxalic acid.—Archiv fur klinische Medicin, Nos. 5 and 6, vol. lxii, 1899.